

Gross

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

OTTO E. FRITCHEARD,
Plaintiff,

vs.

LIGGETT & MYERS TOBACCO
COMPANY,
Defendant.

Civil Action No. 12820

PROCEEDINGS OF THURSDAY, APRIL 14, 1960

Jury trial held in Pittsburgh, Pennsyl-
vania, commencing on Monday, April 4,
1960, before the HONORABLE JOHN L. MILLER,
D. J. and a Jury.

A P P E A R A N C E S

McArdle, Harrington & McLaughlin, by:

James P. McArdle, Esq. and
James E. McLaughlin, Esq.,
For the Plaintiff.

Thorp, Reed & Armstrong, by:

Earl F. Reed, Esq. and
Kenneth G. Jackson, Esq.

Webster, Sheffield & Chrystie, by:

Frederick P. Haas, Esq.
For the Defendant.

Sidney Cantvarg,
Margaret A. Koenig,
Erna H. Pock,
Official Reporter.

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Main PI File Room
Charleston, SC

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to see if you can locate that original?

MR. MAAS: I certainly will. I did before I left, but I will check again.

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MR. MARBLE: The deposition was taken of Dr. Paul Magnus Gross at the office of the Liggett & Myers Tobacco Company at 630 Fifth Avenue, New York City, New York, January 5, 1969.

DIRECT EXAMINATION

BY MR. McLAUGHLIN:

Q Will you state your full name, please.

A Paul Magnus Gross.

Q And where do you live?

A [DELETED]

Q By whom are you employed, Dr. Gross?

A Duke University.

Q In what capacity?

A I am Professor of Chemistry and Vice-President of the University.

Q How long have you been so employed by the University?

A Since the University was founded in 1924.

Q How long have you been Vice-President of the University?

A Since 1949.

Q Will you tell me briefly, Doctor, about

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your educational background?

A I received my college training at the College of the City of New York and I received the BS degree in 1916. I then did graduate study in chemistry at Columbia and received the Ph.D in chemistry in 1919.

Q Following the receipt of your Ph.D. what did you do?

A Well, prior to that I was a Second Lieutenant in the Chemical Warfare Service in World War I.

Q At the conclusion of World War I, what did you do?

A I went to Trinity College in Durham as an assistant professor in chemistry. Trinity College was subsequently renamed Duke University in 1924.

Q And your employment with Duke University since 1924 has been continuous?

A Yes.

Q In addition to being employed by Duke University and Trinity College prior to that, have you been retained as consultant by any manufacturing firm?

A Well, I have been retained as a consultant

by Liggett & Myers Tobacco Company since 1949.

Q In the field of chemistry did you have any specialty?

A My broad specialty is physical chemistry.

Q In the application of that specialty have you confined yourself to any particular phase of physical chemistry?

A My academic application has been in the field of --

Q Prior to 1949 and prior to being consultant for Liggett & Myers, did you have any contact with Liggett & Myers?

A -- Yes, indirectly, in the sense that I supervised an industrial research program under a grant to the University by Liggett & Myers Tobacco Company.

Q When did you begin supervising that laboratory?

A It was in 1920 at Trinity College, and that continued afterwards to Duke University.

Q By whom was that laboratory staffed -- you, personally?

A Yes, this was under my supervision as professor of chemistry, and the personnel of the laboratory were hired as research associates and had an ancillary staff capacity to the department.

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Q And you were in charge of this laboratory from 1920 until what year - 1949?

A Yes, the work is still continuing under this industrial research grant.

Q Do you still supervise it?

A Not directly. I have a general supervision. There are other supervisors directly.

Q Now, in the period, say from 1924 at Duke University, up until 1949, approximately how many people were employed in the laboratory, if you can recall?

A It varied greatly. In the early years there were two people and the maximum at any time was five or six. I don't recall exactly, but this was somewhere in the period of the '30's. I am speaking of technical people and not technicians or stenographic help.

Q And you were in complete charge of the laboratory?

A Yes.

Q And you chose the personnel?

A Yes.

Q What type of research was carried on at that laboratory in that period?

A The main type of research carried on had

to do with studying the properties of tobacco from

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the standpoint of the chemistry and composition of tobacco, with the broad objective of improving the culture and growing of tobacco. This work was done with experiment stations and farm agencies of North Carolina and other states. Tobacco diseases were also studied. ✓

Q Doctor, have you ever published any scientific papers?

A Yes, I have published a number; probably 60, I would say, something of that sort.

Q Do any of these papers deal with tobacco?

A Yes, there are about eight or ten of them that deal with tobacco, of which I am co-author and not sole author.

Q With whom did you collaborate?

A Various people.

Q Would you name them?

A Dr. Darkis, Mr. Dixon, Dr. Hobbs, Dr. Wolf.

Q Can you recall in what scientific journals they appeared?

A They appeared primarily in the Journal of Industrial and Engineering Chemistry of the American Chemical Society. There were several relating to plant growth which appeared in botanical

journals. I can't recall the name offhand.

Q From the period of 1924 until 1930 --

MR. JACKSON: You are mixing these dates up, Mr. McLaughlin. Do you intend to jump from one set of dates here to another? You have talked from 1924 to 1949, now you are getting into another series of dates. Is it possible to keep these periods together so we don't get confused?

Q From 1924 to 1930, approximately, did the laboratory at Duke University, which you supervised and concerned yourself with industrial research for Liggett & Myers, have any artificial smoking machines, and/or other means of smoking cigarettes?

A Approximately from 1929 to 1932 we had a rather simple artificial smoking machine, the purpose of which was to determine the burning characteristics of paper in cigarettes.

Q You stated that you had this machine from 1929 to 1932. After 1932 was it abandoned?

A This phase of the work was stopped about 1932. I should say in March. I don't have the exact date in mind, and we reduced the scale of our operations materially. This was the depression, as you may recall, and we concentrated more heavily with the staff we had on collaborative research in

terms of the development of new types of tobacco and fertilization, and this was done as a public service. This was done in collaboration with the farm agencies of the state, and other groups. It was directed primarily to a public service interest, and that was indicated by the fact that we published and sent out a series of papers.

Q What was the purpose in 1929 of beginning a program of study of cigarettes?

A We were interested in the development and improvement of cigarette paper, and this was done.

Q By an improved cigarette paper do you mean one with a better burning quality?

A Not only that, but better tensile strength and one that was manufactured under closely supervised conditions of specifications and uniformity than had been available before.

Q Was this smoking machine built right at the laboratory, or was it purchased?

A It was built at the laboratory.

Q Who designed it?

A I think it was a collaborative effort. It was a very simple type of machine to draw air through a cigarette. It was a rather simple

version of such a machine.

Q Was any apparatus connected with it that collected the smoke?

A Yes, there was a collector for determining such things as nicotine in the smoke and analysis of the nicotine in the smoke was made.

Q Was nicotine the only element that was analyzed in the smoke?

A There were other things, such as the alkalinity of the smoke and the nitrogen content. Smoke was part of the analysis, but the experiments were from a chemical analysis point of view relatively restricted because they were to determine how the paper changed the smoking conditions of the cigarette.

Q Did the machine have any device connected with it which resulted in the condensation of the smoke and theremoval of the tar?

A Not directly. It was not cooled. It was run into water and the water solution was analyzed. It was a water absorption system of the conventional type. This is a thing that had been done traditionally and we simply adopted it.

Q You say that it had been done?

A Yes, this has been. It was simply a method of analyzing the nicotine in the smoke.

Q By the way, do you speak any foreign languages?

A I speak French and German to some extent.

Q Do you read them, too?

A Yes.

Q Do you read any other foreign languages?

A Not fluently.

Q Do you read French and German fluently?

A Reasonably well - scientific French and German.

Q Why were you interested in the nicotine content of the smoke at that time, if you recall?

A Well, this has always been a matter of interest to the grower and to the industry that the nicotine level be kept within certain definite limits and the result of this was that we correlated the types of tobacco grown, or their nicotine content, and also followed this to the extent of seeing how much of that came through the smoke in connection with the paper.

Q During this period that you mentioned from 1929 to 1932, when you carried on certain experiments with the artificial smoking machine, were any of these experiments designed to determine the effect of the cigarette smoke upon the smoker himself?

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A No, they were solely matters of analysis of the nicotine content, as I described.

Q Following 1932, which you mentioned as the beginning of the depression, did the laboratory at Duke, which was concerned with the industrial research for Liggett & Myers, perform any experiments, or do any research in the field of the physiological effect of cigarette smoking? That is, upon the smoker, and the period I am interested in is from 1932 until December of 1953.

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A No, none was done.

Q I understand that you say, Doctor, that although you become a consultant for Liggett & Myers in 1949, the laboratory for Duke University continued the work?

A Yes, and it should be clear that this was a grant by the company, similar to grants by other companies, for work in the general field of tobacco, and the direction, by agreement, that was taken and continued and re-emphasized in this period was the study of the growing of tobacco and diseases of tobacco, and such things.

Q Well, from 1949 until 1953 did you continue to direct the activities of this laboratory?

A To a less direct degree. In terms of policy, yes, but not in terms of the supervision. The general plan of the laboratory remained the same, that is, collaboration with the agricultural agencies in the study of the different types of tobaccos through selected strains and the growing.

Q Well, some time around that period Liggett & Myers established a research department of its own; is that correct?

MR. JACKSON: What period are you referring to?

MR. McARDLE: 1949 to 1953.

MR. JACKSON: I object to the general scope of

that question. I think he ought to specify more par-

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particularly.

Q You are aware, Doctor, that in September of 1947 Liggett & Myers established their own facilities at the plant?

A Yes.

Q I assume you are acquainted in a professional way with Dr. Frederick R. Darkis?

A Oh, yes.

Q And I believe that in 1950 Liggett & Myers built their own research building at their plant?

A I don't recall the exact date, but it was some time around that.

Q What type of consultation have you performed for the Liggett & Myers Tobacco Company from September, 1949 and up to 1953?

A This was advice about scientific and technical methods in the kind of scientific approach that would be used in a particular scientific problem.

Q To whom would you give the advice?

A Some to Dr. Darkis and occasionally to officials of the company, and sometimes to Dr. Blount.

Q Did you consult with Mr. Few, the president of the company?

A Occasionally, yes.

Q Did you ever consult with any of the executives of the company in the advertising department?

A Not directly. Indirectly, if advice was asked occasionally about things.

Q Was the advice that you would give the company between 1949 and December, 1953 oral or was it in writing?

A It was primarily oral.

Q Would you from time to time send written reports?

A No, not as a consultant.

Q Are you familiar with a firm of research chemists and engineers known as Arthur D. Little, Inc.?

A Yes.

Q I show you what has been marked Plaintiff's Exhibit 15, which is a letter of two pages from Arthur D. Little, Inc., to Liggett & Myers Tobacco Company and ask you to read it, if you will.

A (After reading the letter) Yes, I recall this.

Q That letter indicates, does it not, that a copy of the letter, although addressed to the attention of Mr. Few, was sent to you; is that correct?

A That's correct.

Q With reference to page 2 of that letter, I direct your attention to Paragraph 9 which states:

"Dr M. G. Gray will be in charge of the program

here, and we understand that she should look to Dr. Paul M. Gross for general direction on your behalf."

The Dr. Paul M. Gross referred to in that paragraph is yourself?

A That's correct.

Q Were you present, Dr. Gross, at the initial discussion between Mr. Few and Mr. Stevens on ~~September~~ ^{December} 12, 1951 in Durham, North Carolina, in which the plan or program was discussed?

A I can't recall whether I was, or not. I don't know.

Q Did you thereafter and up until December 12, 1953 have any meetings with Dr. Gray?

A Yes, I attended several meetings in Boston, in Cambridge, at which Dr. Stevens and Dr. Gray were present.

Q Aside from yourself at these meetings were there any officials or executives of Liggett & Myers Tobacco Company there?

A Not that I can recall. I don't believe there were. Well, Dr. Parkis was present at some of the meetings. He was present with me at that time.

Q What sort of direction, if any, did you give Dr.

study?

A Well, the type of direction, advice, that I gave was in relation to the general procedure and outline of the study, but the responsibility of it was not mine, but Arthur D. Little's. This was clearly indicated in the letter and so understood.

Q At the inception of the program did you meet with Dr. Gray and make any suggestions as to how the program should be carried out?

A No, it was primarily a matter of listening. The responsibility was delegated to them and it was done that way, as the letter specifically indicates.

Q Did you at any time enter into any written communication with Dr. Gray or Mr. Stevens concerning this program?

A I don't think I did. I might have done so with Mr. Stevens, but I am quite confident I did not with Dr. Gray.

Q Did you at any time from December, 1951 until December, 1953 have written correspondence with Mr. Few, or any of the officials of the Liggett & Myers Tobacco Company concerning this program?

A I don't believe I did. If I did, it was limited to discussion on the level of financing, or the cost of the

program, or something of that type.

Q By the way, are you a director of Liggett & Myers?

A No, I have no other capacity than what I said, as a consultant.

Q Are you a stockholder?

A Not at the present time, no.

I take that back. I am. I sold some stock lately. I am trying to think. I do have ten shares in the company.

Q Do you know what the purpose was of entering into this study by Arthur D. Little, Inc. in 1951?

A Well, I think in general terms this is outlined in the letter of Mr. Stevens here. It was a setup of procedure for examination as outlined in paragraph 3. That was essentially the purpose.

Q At any time during December of 1951 to December of 1953 did you have any discussion with anyone of Arthur D. Little, Inc., or at Liggett & Myers, concerning the use of this study in an advertising series, or as a subject of a series of advertising?

A Yes, I think there was discussion of that in this period.

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MR. JACKSON: If he wants to drop over to the next page. Where do you propose to pick up?

MR. McARDLE: Page 21.

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Q Did you have any discussion with anyone from Arthur D. Little concerning the use of this study as the subject of an ad, or series of ads?

MR. JACKSON: Just a moment. If Your Honor please, I object to this question. I show Your Honor the advertisement they're talking about. That is marked Exhibit No. 25.

It is objected to for the reason that the evidence in this case clearly demonstrates that there is nothing wrong with the nose and throat of the plaintiff in this case and, therefore, it could have no materiality on any issue in this case.

You recall the medical evidence was that his nose and throat were normal.

THE COURT: Well, what I am reading here, from page 21, I don't see -- am I on the right page?

MR. McARDLE: That's right.

MR. JACKSON: May I borrow your --

MR. McARDLE: He has it.

MR. JACKSON: Oh. I got mine back here.

THE COURT: Now, the question is "Did you have any discussion with anyone from Arthur D. Little concerning the use of this study as the subject of an ad, or series of ads?" That is the

one you are objecting to?

MR. JACKSON: That's right.

THE COURT: Answer, "No." Well, now, --

MR. JACKSON: Well, I am objecting to the introduction of this line of testimony for the reason I stated. Because, if you read the next --

THE COURT: Well, Mr. Jackson, the questions with respect to whether or not he discussed it with anyone, there is nothing there, as I see, that has anything to do with this particular ad. It is just did he discuss the study in connection with advertising?

MR. JACKSON: I think it goes a little further than that, Your Honor.

THE COURT: Well, maybe later on. I don't know.

MR. JACKSON: All right. I will renew my objection to the next question.

A No.

MR. McARDLE: I think we have lost the sense of it now.

I will read the question. Then you repeat the answer.

Q Did you have any discussion with anyone from Arthur D. Little concerning the use of this

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study as the subject of an ad, or series of ads?

A No.

Q With whom did you discuss the use of the study as the subject for a series of ads, if anyone?

MR. JACKSON: Now, I make the same objection as to the previous question.

THE COURT: The answer is that he didn't discuss it. What are you objecting to that for?

MR. JACKSON: I am just objecting to the question because, if Your Honor please, while I know the answer is here, I think it is proper for me to object to the question.

THE COURT: It is very proper for you to object to the question, if you wish to object, but I don't understand the reason for your objection.

MR. JACKSON: Well, the reason for it is that the subject of inquiry is immaterial, and whether he discussed it with somebody or whether he didn't, just because he might happen to have said no doesn't make the line of inquiry proper.

In other words, the answer in the deposition is an incidental thing, and I must, you see, to be able to test this later, I must not be in position of permitting the questions to be asked without indicating an objection to them.

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MR. McARDLE: Oh, you can allow them to be asked without an objection.

MR. JACKSON: This is one of the things that happens when you take depositions.

THE COURT: Oh, you have the right to object. Don't misunderstand me.

I will overrule the objection at this time.

MR. JACKSON: All right.

MR. McARDLE: The question was: With whom did you discuss the use of the study of the subject for a series of ads, if anyone?

A Well, I can't recall that I discussed this study in this context with anybody. As I told you, the function I performed was in terms of a review of the study as outlined, its financial cost, the personnel involved and the presentation to me of the plan of study. That is essentially the capacity that I was involved in it.

Q Do you recall how many meetings you had with anyone from Arthur D. Little, from December of 1951 to December of 1953, concerning this study?

A Well, I should say at the most, two.

Q Did you, Doctor, in 1952, know that the

results of this study by Arthur D. Little were utilized by Liggett & Myers Tobacco Company in the advertisement such as the one I showed you, Plaintiff's Exhibit 25?

MR. JACKSON: Now, I interpose the same objection as before. This is immaterial as to any issue in this case; that the records of the case so far show that the nose and throat and the trachea of the plaintiff were normal and, therefore, a nose and throat ad referred to would have no bearing on any issue in this case.

THE COURT: Well, of course, he hasn't offered the ad at this time.

MR. JACKSON: Beg pardon?

THE COURT: He hasn't offered the ad at this time.

MR. JACKSON: But he is inquiring now about this type of advertisement.

THE COURT: I know he is inquiring.

MR. JACKSON: And, therefore, the context within which the question is asked is well developed within the deposition.

MR. McARDLE: I think, if the Court please, until the ad is offered, these objections are quite premature.

THE COURT: I will overrule the objection.

Q Did you, Doctor, in 1952, know that the results of this study by Arthur D. Little were utilized by Liggett & Myers Tobacco Company in an advertisement such as the one I showed you, Plaintiff's Exhibit 25?

A I presume I did, I probably saw such advertisement, although I can't specifically recall. I presume in that sense I did.

Q Were you specifically consulted with respect to the preparation of this particular advertisement?

A No, definitely not.

Q During the course of your directing the research at the laboratory at Duke University from 1924 until 1953, and during your period of consultation with Liggett & Myers from 1949 to 1953, were you ever consulted by Liggett & Myers with respect to the preparation of any advertisement, or the contents of any advertisement?

A Yes, occasionally I was.

Q In what way were you consulted by the company?

A When technical statements relating to our work were involved in the advertisement, I was asked whether they were correctly stated, or not.

That was occasional. It was not continuous.

It would depend upon the advertising itself.

Q Can you recall how often you would be consulted on that subject?

A I would say not more than three or four times a year, if that. I would say it would be more likely two or three times a year.

Q Now, by whom were you consulted?

A Well, again, you will have to specify periods.

Q Well, to make it specific were you ever consulted by Mr. Few in his capacity as "assistant vice president in charge of advertising, or assistant to the vice president in charge of advertising?" That would be for the period of 1930 to 1951 that he occupied either one of those two positions.

A Yes, I think occasionally toward the latter part of that period I was consulted by Mr. Few.

Q Other than Mr. Few, do you recall the names of any other officials of Liggett & Myers with whom you would consult?

A With Mr. W. U. Flowers. He would be the one in the early period with whom I consulted.

MR. JACKSON: Was that the early part of

1930 to 1951 period?

THE WITNESS: That's correct, yes.

Q Mr. Flowers in that period was vice president in charge of advertising?

A No. He was vice president in charge of manufacturing.

Q At any time between the period of 1924 to 1953, do you recall consulting with any person or official of the advertising agencies which may have represented Liggett & Myers Tobacco Company during that period?

A Not directly. They may have been present on occasions, but certainly not in the contacts that I had directly. My contact was with the two individuals.

Q Now, you mentioned that you discussed the matter of personnel with Dr. H. G. Gray and Mr. Stevens in connection with this testing program referred to in Plaintiff's Exhibit No. 15.

Were you consulted by Mr. Stevens or Dr. Gray with respect to the choice of the physician to be employed?

A No, I was told his name, but that was their responsibility, which they understood.

Q About what type of personnel were you consulted by Mr. Stevens and Dr. Gray?

A Well, it was consultation with the matter of the category of the personnel, and I was not consulted in the sense that I had control. They told me what they wanted to do and that was the limit of my discussion with them. It was their delegated responsibility to do the job.

Q Did you make any suggestion to Dr. Gray or Mr. Stevens concerning the procedure to be followed?

A I don't think that I did, except to the extent that it might have involved the amount of money to be used, the general cost of the program. That was the level of the advice and consultation that I gave, in general terms, for this type of consulting service to the company.

Q Did you, during the period from December of 1951 until December of 1953 receive reports from Arthur D. Little as to the progress of the program and the results they were obtaining?

A Not that I can recall. I may have seen reports, but they didn't come directly to me as far as I can recall.

Q They were not sent directly to you?

A I don't think so.

Q Now, Doctor, up to December of 1953 and from 1924, when Duke University, I assume, was

founded, did the laboratory with which you were charged, which performed the certain types of industrial research for the Liggett & Myers Tobacco Company, ever do any work, to your knowledge, with polycyclic hydrocarbons?

A None whatever.

Q Was the laboratory at Duke University at any time during the period from 1924 to 1953 equipped for spectrographic analysis of chemicals?

✓ MR. JACOBSON: Go ahead. It was a matter of clarification. I would like to have the rest of the question read then. Mr. McLaughlin says at the bottom there, "I am speaking of the laboratory at Duke University."

MR. MOARLES: Yes. Mr. McLaughlin specified it was the laboratory at Duke University that he meant in the body of his question.

L A No, it has no spectroscopic equipment. There was equipment used, but not in that part of the laboratory.

Q So that the record is clear and so that I understand you: We have talked a lot about the laboratory that did the industrial research. Was that a separate laboratory, or was it a group of people

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working in a number of laboratories?

A It was a unit working in several laboratories, but it was a unit carrying on a type of industrial research under a grant. It was not a laboratory of Liggett & Myers. There was a distinction. It was a grant similar to what many companies make to laboratories for carrying on work of interest to the companies. The area was an area of tobacco studies.

Q Well, the personnel in this unit; did they generally confine all their activities in tobacco research under this grant of Liggett & Myers, or did they work for a number of different organizations?

A They did some teaching. Some of them had the status of research associates, which involved research activities for Liggett & Myers, and some of them did teaching. It varied.

Q When you speak of unit which did industrial work for Liggett & Myers --

MR. JACKSON: May I clear the record?

I assume that "a unit" means a group of individuals?

THE WITNESS: That's right.

Q Getting back to my previous question.

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during the period from 1924 to December of 1953, to your knowledge did this unit perform spectrographic analysis of tobacco products in behalf of Liggett & Myers?

A No, none whatever that I can recall.

Q During the period from 1924 to December of 1953, and particularly in the latter portion of the period, in the '50's, did this unit perform any experiments in the realm of paper chromatography with respect to tobacco products?

A No.

Q Dr. Gross, in 1952, Liggett & Myers Tobacco Company began experimentation with various types of filters for its cigarette products. Were you, in your capacity as a consultant, ever consulted about the filter research program?

A To a very limited extent. Practically not at all. This was carried on by the research laboratory, and I don't recall. Possibly I was asked a technical question about filtration, or something of that sort, but I had very little, if any, contact with the program that actually developed the filter.

Q During the period from 1924 to 1949, when you directed the unit at Duke University - the

research for Liggett & Myers - did that unit, under your direction, perform any experiments, or do any research, in the field of filtration?

A None whatever.

Q Doctor, I show you what has been marked as Plaintiff's Exhibit 24, which is a photostatic copy of page 6 of the Pittsburgh Press on Wednesday, November 16, 1931, and I will ask you to examine that for a moment.

MR. JACKSON: Could you wait, now, until we get the ad? I have an objection to this line of questioning, if Your Honor please.

MR. McARDLE: It is page 31 before we get an answer.

THE COURT: On page 31.

MR. McARDLE: I say, it is page 31 before it is answered.

MR. JACKSON: Yes. About two thirds of the way up on the page.

MR. McARDLE: Of course, may I point out, Your Honor, if I am not interrupting your thought as you read --

THE COURT: Go right ahead. I have read it.

MR. McARDLE: At the point of objection there is no question. In other words, counsel, Mr.

Jackson has interrupted these questions before the question is a question.

MR. JACKSON: I don't think so.

MR. McARDLE: I think so.

MR. JACKSON: There was a question, and I objected to it. I think, furthermore, I think --

MR. McARDLE: The question, if the Court please, was at the bottom of page 29. Mr. Jackson interposed an objection after the first paragraph. The entire question contains three paragraphs, two of which so far have not been asked.

MR. JACKSON: Now, I think that it isn't necessary, Mr. McARDLE, for you to make a speech about this. The Judge is reading it, and you and I could argue here for quite a long time.

MR. McARDLE: Mr. Jackson, please. I address my objections to Your Honor, not to Mr. Jackson.

MR. JACKSON: I will address them to the Court then.

MR. McARDLE: I think instead of his discussing it with me, I think I am right in my position, he should address it to Your Honor. I don't want to get into an argument.

MR. JACKSON: I said I addressed it to the Court.

THE COURT: Now, your first objection, as I understand, comes in the middle of page 30, is that correct?

MR. JACKSON: That's right. Now, my objection, if Your Honor please, is quite clear there. It is being tied in with the exhibit itself. If he wants to ask general questions of this witness, it is all right, and he asks them later.

He is directing his attention to something on the ad and then following this question, and that is what I was objecting to.

Now, later on, when he asks questions --

THE COURT: Now, here, for example, can you tell me specifically what type of tests were made, were carried on by that unit, if any, to determine the purity?

MR. JACKSON: All right. I didn't object to that. I was objecting --

THE COURT: Well, now, you did.

MR. JACKSON: Over on 30.

THE COURT: Well, that is what I was reading from, on 30.

MR. JACKSON: If Your Honor please,

if you would start with page 29, what he was about to interrogate the witness on was directing him to a particular advertisement. That is why I objected.

THE COURT: Well, I agree with you the advertisement speaks for itself.

MR. JACKSON: That's right. Now, then, this question on page 30 was a followup on that, but when he gets back over on page 31, I have continued my objection, but I don't have any objection now to that answer.

I would have withdrawn that when we got to that point.

What I was objecting to was tying it in with this as Your Honor said was improper. That is what I am getting at.

MR. McARDLE: Your Honor hasn't said it was improper.

MR. JACKSON: He said it was a proper objection.

THE COURT: I said the ad speaks for itself.

MR. JACKSON: And that was the basis for my objection.

THE COURT: That was the basis of his

objection.

MR. JACKSON: That's right.

THE COURT: Now, you say start at the middle of page 30 with your question, and then you may have that question answered.

MR. McARDLE: That begins "In 1931 --"

THE COURT: Yes.

MR. McARDLE: All right, sir.

sg In 1931 were you in charge of the unit which was performing various types of industrial research for Liggett & Myers?

A That's right.

THE COURT: Just one minute, Mr. McArdle.

Members of the Jury, ordinarily we recess at this time. In view of what transpired yesterday afternoon, I agreed to recess for today at 12:00 o'clock, so we will go right through, if that is satisfactory to you, until 12:00 o'clock.

All right, Mr. McArdle, pardon the interruption.

MR. McARDLE: I was just thinking the Jury didn't know what had transpired yesterday. They were excused.

Q Can you tell me specifically what type of tests --

THE COURT: It was what happened after we excused you, members of the Jury, we came to certain agreements with counsel.

Q Can you tell me specifically what type of tests were carried on by that unit, if any, to determine the purity of the product, tobacco, or paper?

Q Doctor, when I say "purity," --

MR. JACKSON: Now, just moment. That's part of what the Court has ruled out.

THE COURT: Now you read the question in the middle of page 30.

MR. JACKSON: The answer is over, if I may suggest, on page 31.

MR. HARBLE: An objection was made, and then I explained the word "purity."

MR. JACKSON: I think you will find the answer at about the middle of the page on 31.

THE COURT: Are you objecting to that answer in the middle of page 31?

MR. JACKSON: No, I am not. I am not objecting to that. I was objecting to the framework of the earlier intervening questions.

I have no objection to the answer, which I think is proper at this time, if he wants to put it in.

MR. McARDLE: There can't be an answer, I submit to the Court, unless we read the question at the bottom of page 30 and then the answer in the middle of page 31.

MR. JACKSON: Then I must object, because he is incorporating, attempting an explanation of what is in the exhibit, and that was the basis of my objection.

It is a very simple question to ask him what tests were made, and that is what Mr. McARDLE said he was doing.

Now, he asked what tests were made, and the witness finally, after a lot of questions and a lot of colloquy --

THE COURT: Now, wait a minute. The question about that, "Can you tell me specifically what type of tests were carried on by that unit, if any, to determine the purity of the product, tobacco, or paper --"

MR. McARDLE: That was objected to by Mr. Jackson.

THE COURT: Well, all right. He has now withdrawn his objection to that question, and you may read that question and then begin reading the answer

as it appears at the middle of page 31:

"The tests made concerned the purity of cigarette paper --" et cetera.

MR. McARDLE: May I submit, Your Honor --

THE COURT: I have made my ruling, Mr. McArdle.

MR. McARDLE: May I have a moment to correct this deposition, because the changes --

MR. JACKSON: Now, if Your Honor please, I don't think any remarks are necessary. The Court has made his ruling, and it's very clear right there to Mr. McArdle.

MR. McARDLE: -- Please, Mr. Jackson, I will follow the direction of Judge Miller, and I think I understand. I am merely asking for a chance to delete what the Court suggested be deleted, because there are certain words we are avoiding; isn't that right, Your Honor?

THE COURT: That's correct.

MR. McARDLE: That's right.

I am not in disagreement with Your Honor's ruling. I am just asking for time.

THE COURT: We will give you the time.

MR. JACKSON: There is a question on the record to be read there, Your Honor.

MR. MCARDLE: Now, may I return to that question?

THE COURT: Yes.

found on p 31 of deposition
Q Can you tell me specifically what type of tests were carried on by that unit, if any, to determine the purity of the product, tobacco, or paper?

A The tests made concerned the purity of cigarette paper, of the ingredients, such as sugar, that are used in tobacco manufacture, the types, or varieties, of tobacco, to show that it was not contaminated with such things as string or any deleterious material of that type.

Q Were any tests made to determine the freedom from arsenic content in the tobacco?

A I don't know that I can say definitely that they were made, because I simply don't recall. If there was any indication of the possibility, an arsenic test might have been run. This was something that the people were well aware of in the industry and would look out for.

Q Prior to December 11, 1953, I assume you were aware of the existence of a disease known as cancer?

A I certainly was.

Q Prior to December 11, 1953, were you

aware of the type of cancer known as bronchogenic carcinoma, or cancer of the lung

A In general, yes.

Q Prior to December 11, 1953, had you ever become aware of any medical or scientific literature which attempted to relate the disease of cancer, or bronchogenic carcinoma, to the use of cigarettes?

And then I rephrased the question:

Prior to December 11, 1953, did you ever become aware of any medical or scientific literature which related the disease of cancer to the use of cigarettes?

A Well, I think I could properly answer that by saying that I saw newspaper articles which stated that there were attempts to make this relationship, and which anyone would have seen at that time.

Q Prior to December 11, 1953, had you ever become aware of any medical or scientific literature -- there was colloquy, and then another question substituted, and I won't conclude that question --

In the period from 1924 until 1932 were you aware of any scientific or medical literature which attempted to relate the use of cigarettes to the disease known as cancer?

A No, I was not.

Q From the period 1932 until 1950 were you aware of any scientific or medical literature which attempted to relate the use of cigarettes to the disease known as cancer?

A Not to my recollection.

Q Then from the period from 1950 until December of 1953, were you aware of any medical or scientific literature which attempted to relate the problem of smoking cigarettes, the use of tobacco in the form of cigarettes, to the disease of cancer?

A Only to the extent of seeing newspaper accounts of attempts to relate them.

Q Then your acquaintance with any literature which attempted to relate the problem of smoking cigarettes to cancer was solely related to lay statements in newspapers?

A As far as I can recall. I didn't see any technical literature. Certainly there was no technical paper, but my attention was related to the newspaper articles.

Q In 1947, Dr. Gross, it appears that Dr. Barkis became head of the research department of the Liggett & Myers Tobacco Company --

MR. JACKSON: That was September 1, 1947.

Q Before Dr. Barkis joined Liggett &

Myers Tobacco Company as full-time employee in 1947, do you know who was in charge of the research program of Liggett & Myers Tobacco Company, if anyone?

MR. JACKSON: I think you can continue with the answer.

MR. McARDLE: There was an objection, and there was an agreement off the record.

MR. JACKSON: There was a discussion off the record.

MR. McARDLE: There was a discussion off the record, and this question was asked:

Q Dr. Gross, prior to 1947 did the Liggett & Myers Tobacco Company maintain any laboratory facilities in St. Louis, Missouri, or any other place in the United States other than the laboratory at Duke University?

A It maintained a control laboratory in the St. Louis plant. I don't know much about it. A specification and control laboratory.

Q Could you explain what you mean by "control laboratory"?

A Well, if they purchased any material of any type for the industry, including colored wrapping material, or sugar, or whatever the ingredients of

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manufacture, this was a common practice to purchase these on specifications, and the laboratory was a laboratory for testing these.

To my knowledge this was the extent of its operation. I was not too familiar with it. I knew it existed.

Q Was it not your understanding that this laboratory in St. Louis did research?

A It would not be properly characterized as a research laboratory. I think control laboratory would be the proper designation for it.

Q Well, aside from the research work done by the unit at Duke University, prior to the year 1947 were you aware of any other type of scientific research carried on by the Liggett & Myers Tobacco Company?

A No, I don't think so, if you characterize it as research, as you discussed it.

Q You mean, excluding the control laboratory?

A Yes.

Q Well, then, prior to 1947 it would appear that you were in charge of whatever research was being carried on; is that right?

A That's correct, yes.

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Q - During the period from 1924 to 1947 do you recall ever discussing with any of the directors or representatives of Liggett & Myers Tobacco Company the effect of the use of Chesterfield cigarettes upon the health of the consumer?

A No, I don't recall any such discussion.

MR. JACKSON: I think you reframed the next question at the bottom of page 37.

Q Doctor, do you recall when in the period between 1950 and 1953 you saw these newspaper articles dealing with the alleged relationship of smoking cigarettes and cancer?

A I frankly can't recall when. I know I saw them, but I can't recall when.

Q Subsequent to your seeing these articles were you consulted, or did you consult with, any of the officials of Liggett & Myers Tobacco Company concerning the problem of the alleged relationship of the use of cigarettes in the development of cancer?

A Well, I think that was discussed in general terms on several occasions.

Q With whom was it discussed?

A Well, I certainly discussed it with Dr. Darkin occasionally and I may have discussed it on one or two occasions with Mr. Few.

Q What was the nature of the discussions that you had?

A They were related to the question of the validity of the association of the statistical data in general terms, that was reported in these newspaper articles.

Q Do you recall whether you were consulted with respect to your opinion as to the validity of the association?

A Yes, I think I was.

Q And did you give such an opinion?

A Yes, I can recall stating that the associated statistical data did not appear to be valid or conclusive with relation to causation.

You asked me my opinion?

MR. HOLLAENDER: Yes.

(Thereupon, a five-minute recess was taken.)

Q Dr. Gross, you mentioned that some time from 1950 up to 1955 - you can't recall the specific dates - you encountered certain newspaper articles dealing with the alleged relationship of smoking and cancer. Specifically, what kind of newspaper articles were they? What did they deal in - the statistics?

A They dealt with - the one I had in mind was the type of article that Hammond published as to the

relationship of the statistical data between cancer and cigarette smoking. These are the ones that I recall.

Q And these are the articles to which you refer when you mentioned that you gave your opinion that the statistical data did not appear to be valid or conclusive as to causation?

A Yes.

Q Do you recall to whom you gave that opinion?

A I think it was mainly to Dr. Darkis, as I recall the discussion of the articles when they appeared.

Q Do you recall whether you ever discussed that opinion with Mr. Few?

A Very likely I did, although I can't say specifically because Dr. Darkis was the one I dealt with in relation to it.

Q Do you recall whether you were asked for your opinion, or whether you volunteered your opinion?

A I was very likely asked for my opinion. I just don't remember, but I believe that would have been so.

MR. JACKSON: You are assuming that?

THE WITNESS: I am assuming that, yes.

Q Was this opinion that you gave to either Dr. Darkis, or Mr. Few, given orally, or given in writing?

A It was given orally.

Q Did you ever, prior to December 11, 1953, give a written opinion to Mr. Few or to Dr. Darkis concerning your opinion on the alleged relationship on the use of tobacco and cancer?

A I don't believe I did. These were in conferences and discussions.

Q Are you familiar with the condensate of tobacco smoke, commonly referred to by chemists as tar?

A In general, yes.

Q During that period of 1924 until 1947, when you had charge of the research laboratory, working at Duke University on a project for Liggett & Myers, do you recall if any work was done with relation to the tar content of Chesterfield cigarettes?

A None was done during that period.

Q Do you recall when you first became acquainted with the use of the word tar as it refers to the condensate of cigarette smoke?

A Well, this would be very long ago. This

is an old term in the literature, a very ambiguous one, but in the literature of tobacco chemistry you will find its occurrence. It might go back to 1900, or something like that. I don't remember, but I certainly knew of the use of that word in its ambiguous sense for some time.

Q And I assume, Doctor, that during the period from 1924 until 1947, when you headed the research unit of Liggett & Myers at the laboratory at Duke University, there was no program of analysis of this smoke condensate which we refer to as tar?

A No, none whatever in that period.

Q At any time during that period did the unit have the equipment for the production of the collection of this condensate?

A No, it did not. The collection was made in water, as I think I answered earlier.

Q At any time prior to December, 1953, did you ever have any meetings with Mr. Fred Walsh of Cunningham & Walsh, the advertising agency?

A Not that I recall. He might have been in a group that I met, but I didn't have any specific meetings that I recall. That's the best of my recollection. I knew he existed and I may have met him at one time.

Q You don't recall having met him in a professional capacity?

A I am sure I didn't.

Q At any time during the period from 1924 to 1947, when Dr. Darkins became research director for Liggett & Myers, were you ever submitted any proposed layouts of ads, or proposed copies of ads by Liggett & Myers Tobacco Company?

A Not that I recall during that period.

Q I believe you stated that there were reports that were made of the work being done by your unit at Duke to the vice president in charge of manufacturing; is that right?

A That's right.

Q At any time during the period from 1934 to 1947 did you make reports, or send copies of reports, to the vice president in charge of the advertising of Liggett & Myers Tobacco Company?

A No, I contact the vice president directly.

Q Did you also make reports directly to the President of Liggett & Myers?

A No, I did not.

Q In addition to your Ph.D. from Columbia, do you hold any honorary doctorate?

A No, I have no honorary degrees.

Q What was the subject of your doctorate?

A It was on the conductivity of certain non-electrolytic solutions. That is not the specific title. I have forgotten that, but that is the subject.

Q Aside from the articles which you have prepared for various scientific or professional journals have you ever written books?

A I was joint author with James Bell on a work on physical chemistry. Again I have forgotten the name. It was some time in the '30's.

Q Do I understand you correctly that you said you became Vice President of Duke University in 1949?

A That's right.

Q And are you still acting in that capacity?

A That's correct.

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